LISTING OF THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in this application.

1. (Currently Amended) A method of executing tasks comprising:

dividing a unit <u>of processing</u> time <u>for</u> ~~of processing in~~ executing tasks <u>of a process</u> by a processor into a reserved band for guaranteeing ~~real-timeness~~ <u>time-critical tasks</u> and a non-reserved band <u>for non-time-critical tasks</u> ~~not for guaranteeing real-timeness~~; and

skipping a task to be executed in the non-reserved band ~~as appropriate~~ when ~~the~~ <u>a</u> throughput of a processor falls<u>, wherein</u> ~~in throughput.~~

<u>a non-time-critical task is determined to be skipped by consulting a control target table, which determines how far to execute non-time-critical tasks in association with each other.</u>

2. (Currently Amended) The method of executing tasks according to claim 1, wherein [[an]] <u>the</u> operating frequency of the processor is lowered when the processor or a peripheral circuit thereof exceeds a predetermined threshold in temperature.

3. (Currently Amended) The method of executing tasks according to claim 1, wherein [[an]] <u>the</u> operating frequency of the processor is lowered depending on power consumption of the processor.

4. (Currently Amended) A task management method comprising:

classifying tasks to be executed by a processor into a first type and a second type depending on properties thereof; and

executing tasks of the first type while skipping a task of the second type to be executed between the tasks of the first type ~~as appropriate~~ if there is a possibility that <u>time-critical</u> ~~real-timeness of~~ processing is impaired by a predetermined factor<u>, wherein</u>

<u>the second type of task is determined to be skipped by consulting a control target table, which determines how far to execute the second type of tasks in association with each other.</u>

5. (Currently Amended) The task management method according to claim 4, wherein:

the processor recognizes, by a predetermined method, that the task of the first type is one that is time-critical ~~whose real-timeness must be guaranteed~~; and

the processor recognizes, by a predetermined method, that the task of the second type is one that is non-time-critical ~~whose real-timeness is not guaranteed~~.

6. (Currently Amended) A task management device comprising:

a local memory;

a switch instruction unit, which issues an instruction to switch a plurality of tasks to be executed by a main processing unit; and

a detection unit, which detects the [[a]] throughput of the processor, wherein

the switch instruction unit divides a unit of processing time ~~of processing~~ into a reserved band for guaranteeing ~~real-timeness~~ time-critical tasks and a non-reserved band for non-time-critical tasks ~~not for guaranteeing real-timeness~~, and skips a task to be executed in the non-reserved band ~~as appropriate~~ when ~~the~~ a throughput of the main processing unit falls, and wherein ~~in throughput.~~

a non-time-critical task is determined to be skipped by consulting a control target table stored in memory, which determines how far to execute non-time-critical tasks in association with each other.

7. (Currently Amended) The task management device according to claim 6, wherein the detection unit detects the [[an]] operating frequency of the main processing unit.

8. (Currently Amended) The task management device according to claim 6, further comprising an interpretation unit, which interprets [[a]] the time-critical requirement pertaining to ~~real-timeness written in~~ programs executed by the respective tasks, and wherein

the switch instruction unit allocates each of the tasks to either the reserved band or the non-reserved band based on the interpretation.

9. (Currently Amended) The task management device according to claim 6, further comprising a determination unit that determines properties of [[the]] programs executed by the respective tasks, and wherein

the switch instruction unit allocates each of the tasks to either the reserved band or the non-reserved band based on the determination.

10. (Currently Amended) The task management device according to claims 6, wherein the unit of processing time is one pertaining to display processing.

11. (Currently Amended) The task management device according to 6, further comprising a second detection unit, which detects the utilization a usage rate of the main processing unit, and wherein

the switch instruction unit modifies [[a]] the rate of execution of a task to be executed in the non-reserved band according to the usage rate utilization.

12. (Currently Amended) The task management device according to claim 11, wherein the control target table stores information on the operating frequency of the main processing unit and the rate of execution of a task to be executed in the non-reserved band at the operating frequency and wherein

when the utilization of the main processing unit is lower than a predetermined threshold, the switch instruction unit makes the rate of execution of the task to be executed in the non-reserved band higher than the rate of execution set in the table.

further comprising a table which stores information on a throughput of the main processing unit and the rate of execution of the task to be executed in the non-reserved band at the throughput in association associated with each other, and wherein

when the usage rate of the main processing unit is lower than a predetermined threshold, the switch instruction unit makes the rate of execution of the task to be executed in the non-reserved band higher than the rate of execution set in the table.

13. (Currently Amended) A task management device comprising:
a local memory;
a switch instruction unit, which issues an instruction to switch a plurality of tasks to be executed by a main processing unit; and
a detection unit, which detects [[a]] the throughput of the main processing unit, wherein

the switch instruction unit classifies the tasks to be executed by the main processing unit into a first type and a second type depending on properties thereof, and executes tasks of the first type while skipping a task of the second type to be executed between the tasks of the first type ~~as appropriate~~ if there is a possibility that <u>time-critical</u> ~~real-timeness of~~ processing is impaired by a predetermined factor<u>, wherein</u>

<u>the second type of task is determined to be skipped by consulting a control target table stored in memory, which determines how far to execute the second type of tasks in association with each other</u>.

14. (Currently Amended) A semiconductor integrated circuit comprising:

a main processing unit<u>,</u> which executes predetermined tasks; and

a task management unit<u>,</u> which divides a unit <u>of processing</u> time ~~of processing~~ into a reserved band for guaranteeing ~~real-timeness~~ <u>time-critical tasks</u> and a non-reserved band <u>for non-time-critical tasks</u> ~~not for guaranteeing real-timeness~~, and skips a task to be executed in the non-reserved band ~~as appropriate~~ when <u>a throughput of</u> the main processing unit falls<u>, wherein</u> ~~in throughput.~~

<u>a non-time-critical task is determined to be skipped by consulting a control target table, which determines how far to execute non-time-critical tasks in association with each other</u>.

15. (Currently Amended) The semiconductor integrated circuit according to claim 14, further comprising a clock generation unit<u>,</u> which supplies a clock having a predetermined operating frequency to the main processing unit, and wherein

the task management unit skips a task to be executed in the non-reserved band ~~as appropriate~~ when the operating frequency falls.

16. (Original) The semiconductor integrated circuit according to claim 15, wherein the clock generation unit lowers the operating frequency when the main processing unit or a periphery thereof exceeds a predetermined threshold in temperature.

17. (Original) The semiconductor integrated circuit according to claim 16, wherein the clock generation unit lowers the operating frequency depending on power consumption.

18. (Currently Amended) The semiconductor integrated circuit according to claim 15, wherein the task management unit skips the task to be executed in the non-reserved band ~~as appropriate~~ when the main processing unit or a periphery thereof exceeds a predetermined threshold in temperature.

19. (Currently Amended) The semiconductor integrated circuit according to claim 15, wherein the task management unit skips the task to be executed in the non-reserved band ~~as appropriate~~ depending on power consumption.

20. (Currently Amended) A semiconductor integrated circuit comprising:

a main processing unit, which executes tasks at a predetermined operating frequency;

a clock generation unit, which supplies a clock having the operating frequency to the main processing unit; [[and]]

a circuit, which <u>receives a task management function for task management to divide a unit of processing time into a reserved band for guaranteeing time-critical tasks and a non-reserved band for non-time-critical tasks for skipping a task to be executed in the non-reserved band when the operating frequency of a processor falls; and</u>

<u>a control target table, wherein a non-time-critical task is determined to be skipped by consulting the control target table, which determines how far to execute non-time-critical tasks in association with each other.</u>

~~realizes a task management function dynamically by reading a program for realizing the task management function from exterior, wherein~~

~~the task management function includes dividing a unit time of processing into a reserved band for guaranteeing real-timeness and a non-reserved band not for guaranteeing real-timeness, and skipping a task to be executed in the non-reserved band as appropriate when the operating frequency falls.~~

21. (Currently Amended) An electronic apparatus comprising:

a processor, which executes tasks at a predetermined operating frequency; and

a storing unit, which stores a program to be executed by said processor, ~~wherein~~ the processor executes the program to perform the function for task management to divide a unit of processing time into a reserved band for guaranteeing time-critical tasks and a non-reserved band for non-time-critical tasks for skipping a task to be executed in the non-reserved band when the operating frequency of a processor falls; and

a control target table, wherein a non-time-critical task is determined to be skipped by consulting the control target table, which determines how far to execute non-time-critical tasks in association with each other.

~~the program makes the processor realize the function of dividing a unit time of processing into a reserved band for guaranteeing real-timeness and a non-reserved band not for guaranteeing real-timeness, and scheduling tasks so that a task to be executed in the non-reserved band is skipped as appropriate when the operating frequency falls.~~

22. (Original) The electronic apparatus according to claim 21, further comprising a frequency control unit which lowers the operating frequency when the processor or a peripheral circuit thereof exceeds a predetermined threshold in temperature.

23. (Original) The electronic apparatus according to claim 21, further comprising a frequency control unit which lowers the operating frequency depending on power consumption.

24. (Currently Amended) A computer-readable storage medium that stores a program executed by a processor, the program including the function of:

dividing a unit of processing time into a reserved band for guaranteeing time-critical tasks and a non-reserved band for non-time-critical tasks for skipping a task to be executed in the non-reserved band when the throughput of the processor falls,

wherein a non-time-critical task is determined to be skipped by consulting a control target table, which determines how far to execute non-time-critical tasks in association with each other.

~~program for making a computer realize the function of dividing a unit time of processing in executing tasks by a processor into a reserved band for guaranteeing real-timeness and a non-reserved band not for guaranteeing real-timeness, and skipping a task to be executed in the non-reserved band as appropriate when the processor falls in throughput.~~

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25. (Currently Amended) A <u>computer-readable storage medium that stores a program executed by a processor, the program including the functions of:</u>

<u>classifying tasks to be executed by the processor into a first type and a second type depending on properties thereof; and</u>

<u>executing tasks of the first type while skipping a task of the second type to be executed between the tasks of the first type</u> ~~as appropriate~~ <u>if there is a possibility that time-critical</u> ~~real-timeness of~~ <u>processing is impaired by a predetermined factor, wherein</u>

<u>the second type of task is determined to be skipped by consulting a control target table, which determines how far to execute the second type of tasks in association with each other.</u>

~~program for making a computer realize the function of classifying tasks to be executed by a processor into a first type and a second type depending on properties thereof, and executing tasks of the first type while skipping a task of the second type to be executed between the tasks of the first type as appropriate if there is a possibility that real-timeness of processing is impaired by a predetermined factor.~~

26. (Currently Amended) A task management system comprising:

a processor<u>,</u> which executes tasks at a predetermined operating frequency;

a clock generation unit<u>,</u> which supplies a clock having the operating frequency to said processor; and

a switch instruction unit<u>,</u> which issues an instruction to switch a plurality of tasks to be executed by said processor, wherein

<u>the switch instruction unit divides a unit of processing time for executing tasks of a process by a processor into a reserved band for guaranteeing time-critical tasks and a non-reserved band for non-time-critical tasks and skips a task to be executed in the non-reserved band when the operating frequency of a processor falls, and wherein</u>

<u>a non-time-critical task is determined to be skipped by consulting a control target table, which determines how far to execute non-time-critical tasks in association with each other.</u>

~~the switch instruction unit divides a unit time of processing into a reserved band for guaranteeing real-timeness and a non-reserved band not for guaranteeing real-timeness, and skips~~

~~a task to be executed in the non-reserved band as appropriate when the operating frequency of said processor falls.~~

27. (Original) The task management system according to claim 26, wherein the clock generation unit lowers the operating frequency when the processor or a peripheral circuit thereof exceeds a predetermined threshold in temperature.

28. (Original) The task management system according to claim 26, wherein the clock generation unit lowers the operating frequency depending on power consumption.

29. (Currently Amended) The task management device according to 8, further comprising a second detection unit, which detects the utilization ~~a usage rate~~ of the main processing unit, and wherein

the switch instruction unit modifies [[a]] the rate of execution of a task to be executed in the non-reserved band according to the ~~usage rate~~ utilization.

30. (Currently Amended) The task management device according to 9, further comprising a second detection unit, which detects the utilization ~~a usage rate~~ of the main processing unit, and wherein

the switch instruction unit modifies [[a]] the rate of execution of a task to be executed in the non-reserved band according to the ~~usage rate~~ utilization.